UNITED STATES PATENT AND TRADEMARK OFFICE

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|---|---|---|---|
| 10/681,801 | 10/08/2003 | Patrick F. Gonzalez | 100110177-1 | 6624 |

22879     7590     02/27/2007
HEWLETT PACKARD COMPANY
P O BOX 272400, 3404 E. HARMONY ROAD
INTELLECTUAL PROPERTY ADMINISTRATION
FORT COLLINS, CO 80527-2400

| EXAMINER |
|---|
| EGAN, SCOTT T |

| ART UNIT | PAPER NUMBER |
|---|---|
| 2622 | |

| SHORTENED STATUTORY PERIOD OF RESPONSE | MAIL DATE | DELIVERY MODE |
|---|---|---|
| 3 MONTHS | 02/27/2007 | PAPER |

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

PTOL-90A (Rev. 10/06)

| | Application No. | Applicant(s) |
|---|---|---|
| **Office Action Summary** | 10/681,801 | GONZALEZ, PATRICK F. |
| | Examiner | Art Unit | |
| | Scott Egan | 2622 | |

*-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --*

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

1)☒ Responsive to communication(s) filed on <u>08 October 2003</u>.

2a)☐ This action is **FINAL**.    2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

4)☒ Claim(s) <u>1-20</u> is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) <u>1-20</u> is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

## Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on <u>08 October 2003</u> is/are: a)☒ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date _____.

5) ☐ Notice of Informal Patent Application

6) ☐ Other: _____.

## DETAILED ACTION

1.     This action is responsive to the original application filed on October 8, 2003.

2.     Claims 1-20 are currently pending in this application. Claim 1, 7 and 16 are

independent.

### *Claim Rejections - 35 USC § 102*

3.     The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that

form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4.     **Claims 1-20** are rejected under 35 U.S.C. 102(e) as being anticipated by **Nozaki**

**et al. (US 7,027,087).**

Consider **claim 1**, Nozaki et al. explicitly teach "a digital camera for capturing an

image comprising:

an image sensor (image pick-up means 1, figure 1; image pick-up element 23,

figure 3);

a capture trigger (release button 30, figure 3);

a capture buffer comprising a plurality of buffer locations (temporary memory

means 2, figure 1; image memory 25, figure 3), each of which is available for storing

image data (in the electronic camera, the temporary memory means 2 takes new image

data from the image pick-up means 1 successively while waiting for the release

operation, column 4, lines 36-37); and

a processing system (microprocessor 26 and image processor 24, figure 3)

configured to detect activation of the capture trigger (the switch output of the release

button 30 is connected to the microprocessor 26, column 7 lines 32-34) and receive a

corresponding image frame from the image sensor (column 8, lines 12-15), to store the

corresponding image frame in an available buffer location (column 8, lines 16-21), to

perform image processing on the corresponding image frame (column 8, lines 45-48 are

interpreted to mean the microprocessor continues processing), and to designate the

available buffer location in which the corresponding image frame is stored as

unavailable for image storage until the image processing is complete (figure 4 shows

the process, which is interpreted as showing that the memory is unavailable until the

information is recorded in the saving area at S8 and then the process begins again with

an available memory location)."

Consider **claim 2**, Nozaki et al. explicitly teach "the digital camera of claim 1

wherein the processing system further is configured to detect a second activation of the

capture trigger (after storing the image in the saving memory in S8 the camera again

can detect a trigger release in S1, figure 4) and receive a second corresponding image

frame from the image sensor (column 8, lines 12-15), to store the second corresponding

image frame in a second available buffer location (column 8, lines 16-21), to perform

image processing on the second corresponding image frame (column 8, lines 45-48 are

interpreted to mean the microprocessor continues processing), and to designate the

second available buffer location as unavailable for image storage until the image

processing is complete (figure 4 shows the process, which is interpreted as showing

that the memory is unavailable until the information is recorded in the saving area at S8

and then the process begins again with an available memory location)."

Consider **claim 3**, Nozaki et al. explicitly teach "the digital camera of claim 1

wherein the processing system is configured to receive auxiliary image frames from the

image sensor and to store each auxiliary image frame in another available buffer

location (in the electronic camera, the temporary memory means 2 takes the new image

data from image-pick-up means 1 successively while waiting for the release option,

column 4, lines 35-37)."

Consider **claim 4**, Nozaki et al. explicitly teach "the digital camera of claim 3

wherein the processing system further is configured to use at least one auxiliary image

frame to perform the image processing on the corresponding image frame and to

designate at least one another available buffer location in which the at least one

auxiliary image frame is stored as unavailable for image storage until the image

processing is complete (column 4, lines 43-56 describe how the temporary memory

stops accepting new data when the switch is activated and there are frames from before

and after the shutter is pressed in the memory, which could be used in compensate for

hand shake, which is interpreted as processing of the image)."

Consider **claim 5**, Nozaki et al. explicitly teach "the digital camera of claim 1

wherein the processing system further is configured to compress the corresponding

image frame prior to storing the corresponding image frame in the available buffer

location with at least one compression method selected from a group consisting of A-

law compression, μ-law compression, and discard mode compression (the image

processor 24 performs color signal processing, A/D conversion, γ correction, image

compression and the like, column 7 lines 14-17)."

Consider **claim 6**, Nozaki et al explicitly teach "the digital camera of claim 1

wherein the processing system (microprocessor 26 and image processor 24, figure 3)

further is configured to perform the image processing according to an image processing

timing mode selected from at least one member of a group consisting of: performing the

image processing immediately after storing the corresponding image frame in the

available buffer location, performing the image processing after all buffer locations in the

capture buffer are unavailable, performing the image processing after all buffer locations

in the capture buffer are unavailable and until at least one unavailable buffer location

becomes available, and performing the image processing after all buffer locations in the

capture buffer are unavailable and until all buffer locations become available (figure 4

shows the flow chart of how the image data processing, S7 and S8 [see also, column 8,

lines 43-48], is done after the capture of the image, S1 with a response of YES)."

Consider **claim 7**, Nozaki et al. explicitly teach "a method for capturing an image

in a digital camera, the digital camera comprising an image sensor (image pick-up

means 1, figure 1; image pick-up element 23, figure 3), a capture trigger (release button

30, figure 3), a capture buffer (temporary memory means 2, figure 1; image memory 25, figure 3) comprising a plurality of buffer locations each of which is available for storing image data (in the electronic camera, the temporary memory means 2 takes new image data from the image pick-up means 1 successively while waiting for the release operation, column 4, lines 36-37), and a processing system (microprocessor 26 and image processor 24, figure 3), the method comprising:

detecting activation of the capture trigger (the switch output of the release button 30 is connected to the microprocessor 26, column 7 lines 32-34) and receiving a corresponding image frame at the processing system from the image sensor (column 8, lines 12-15);

storing the corresponding image frame in an available buffer location (column 8, lines 16-21);

performing image processing on the corresponding image frame (column 8, lines 45-48 are interpreted to mean the microprocessor continues processing); and

designating the available buffer location in which the corresponding image frame is stored as unavailable for image storage until the image processing is complete (figure 4 shows the process, which is interpreted as showing that the memory is unavailable until the information is recorded in the saving area at S8 and then the process begins again with an available memory location)."

Consider **claim 8**, Nozaki et al. explicitly teach "the method of claim 7 further comprising:

detecting a second activation of the capture trigger (after storing the image in the saving memory in S8 the camera again can detect a trigger release in S1, figure 4) and receiving a second corresponding image frame at the processing system from the image sensor (column 8, lines 12-15);

storing the second corresponding image frame in a second available buffer location (column 8, lines 16-21);

performing image processing on the second corresponding image frame (column 8, lines 45-48 are interpreted to mean the microprocessor continues processing); and

designating the second available buffer location in which the second corresponding image frame is stored as unavailable for image storage until the second image processing is complete (figure 4 shows the process, which is interpreted as showing that the memory is unavailable until the information is recorded in the saving area at S8 and then the process begins again with an available memory location)."

Consider **claim 9**, Nozaki et al. explicitly teach "the method of claim 7 further comprising receiving a plurality of auxiliary image frames from the image sensor and storing each auxiliary image frame in another available buffer location (in the electronic camera, the temporary memory means 2 takes the new image data from image-pick-up means 1 successively while waiting for the release option, column 4, lines 35-37)."

Consider **claim 10**, Nozaki et al. explicitly teach "the method of claim 9 further comprising:

detecting a plurality of second activations of the capture trigger (after storing the image in the saving memory in S8 the camera again can detect a trigger release in S1,

figure 4) and receiving a plurality of second corresponding image frames at the

processing system from the image sensor (column 8, lines 12-15);

storing each of the plurality of second corresponding image frames in second

available buffer locations (column 8, lines 16-21);

performing image processing on the second plurality of corresponding image

frames (column 8, lines 45-48 are interpreted to mean the microprocessor continues

processing); and

designating each of the second available buffer locations in which the second

plurality of corresponding image frames are stored as unavailable for image storage

until the image processing is complete for that second corresponding image frame

(figure 4 shows the process, which is interpreted as showing that the memory is

unavailable until the information is recorded in the saving area at S8 and then the

process begins again with an available memory location)."

Consider **claim 11**, Nozaki et al. explicitly teach "he method of claim 10 further

comprising receiving at least one of the auxiliary image frames before receiving at least

one of the second plurality of corresponding image frames (in the electronic camera, the

temporary memory means 2 takes the new image data from image-pick-up means 1

successively while waiting for the release option, column 4, lines 35-37, since the

images are continuously captured and not permanently saved until after the release

button is pressed the first corresponding frames would be received before the second)."

Consider **claim 12**, Nozaki et al. explicitly teach "the method of claim 9 further

comprising using at least one auxiliary image frame to perform the image processing on

the corresponding image frame and designating the at least another available buffer

location in which the at least one auxiliary image frame is stored as unavailable for

image storage until image processing is complete (column 4, lines 43-56 describe how

the temporary memory stops accepting new data when the switch is activated and there

are frames from before and after the shutter is pressed in the memory, which could be

used in compensate for hand shake, which is interpreted as processing of the image)."

Consider **claim 13**, Nozaki et al. explicitly teach "the method of claim 9 further

comprising compressing the plurality of auxiliary image frames prior to storing the

plurality of auxiliary image frames in the another available buffer locations with at least

one compression method selected from a group consisting of A-law compression, μ-law

compression, and discard mode compression (the image processor 24 performs color

signal processing, A/D conversion, γ correction, image compression and the like,

column 7 lines 14-17)."

Consider **claim 14**, Nozaki et al. explicitly teach "the method of claim 7 further

comprising compressing the corresponding image frame prior to storing the

corresponding image frame in the available buffer location with at least one

compression method selected from a group consisting of A-law compression, μ-law

compression, and discard mode compression (the image processor 24 performs color

signal processing, A/D conversion, γ correction, image compression and the like,

column 7 lines 14-17)."

Consider **claim 15**, Nozaki et al. explicitly teach "the method of claim 7 further

comprising performing the image processing according to an image processing timing

mode selected from at least one member of a group consisting of: performing the image

processing immediately after storing the corresponding image frame in the available

buffer location, performing the image processing after all buffer locations in the capture

buffer are unavailable, performing the image processing after all buffer locations in the

capture buffer are unavailable and until at least one unavailable buffer location becomes

available, and performing the image processing after all buffer locations in the capture

buffer are unavailable and until all buffer locations become available (figure 4 shows the

flow chart of how the image data processing, S7 and S8 [see also, column 8, lines 43-

48], is done after the capture of the image, S1 with a response of YES)."

Consider **claim 16**, Nozaki et al. explicitly teach "a method for capturing an

image in a digital camera, the digital camera comprising an image sensor (image pick-

up means 1, figure 1; image pick-up element 23, figure 3), a capture trigger (release

button 30, figure 3), a capture buffer (temporary memory means 2, figure 1; image

memory 25, figure 3) comprising a plurality of buffer locations each of which is available

for storing image data (in the electronic camera, the temporary memory means 2 takes

new image data from the image pick-up means 1 successively while waiting for the

release operation, column 4, lines 36-37), and a processing system (microprocessor 26

and image processor 24, figure 3), the method comprising:

detecting a plurality of activations of the capture trigger (the switch output of the

release button 30 is connected to the microprocessor 26, column 7 lines 32-34, the

microprocessor can detect each time the release button is activated) and receiving a

plurality of corresponding image frames at the processing system from the image

sensor (column 8, lines 12-15, each time the shutter is pressed the image information is stored);

storing each corresponding image frame in a corresponding available buffer location (column 8, lines 16-21);

performing image processing on each corresponding image frame (column 8, lines 45-48 are interpreted to mean the microprocessor continues processing);

and designating each corresponding available buffer location in which each corresponding image frame is stored as unavailable for image storage until the image processing is complete for that corresponding image frame (figure 4 shows the process, which is interpreted as showing that the memory is unavailable until the information is recorded in the saving area at S8 and then the process begins again with an available memory location)."

Consider **claim 17**, Nozaki et al. explicitly teach "the method of claim 16 further comprising receiving auxiliary image frames from the image sensor and storing each auxiliary image frame in another available buffer location (in the electronic camera, the temporary memory means 2 takes the new image data from image-pick-up means 1 successively while waiting for the release option, column 4, lines 35-37)."

Consider **claim 18**, Nozaki et al. explicitly teach "the method of claim 17 further comprising receiving at least one of the auxiliary image frames before receiving at least one of the plurality of corresponding image frames (the sampling zone of the image data which remains in the temporary memory means 2 is the zone which spans from before to after the release operation, column 4, lines 47-50, therefore images are stored before

the image for permanent storage is captured a the time of the depression of the release

switch)."

Consider **claim 19**, Nozaki et al. explicitly teach "the method of claim 17 further

comprising using at least one auxiliary image frame to perform the image processing on

at least one of the plurality of corresponding image frames and designating at least one

another buffer location in which the at least one auxiliary image frame is stored as

unavailable until the image processing is complete on the at least one corresponding

image (column 4, lines 43-56 describe how the temporary memory stops accepting new

data when the switch is activated and there are frames from before and after the shutter

is pressed in the memory, which could be used in compensate for hand shake, which is

interpreted as processing of the image)."

Consider **claim 20**, Nozaki et al. explicitly teach "the method of claim 16 further

comprising compressing the corresponding image frames prior to storing the

corresponding image frames in the corresponding available buffer locations with at least

one compression method selected from a group consisting of A-law compression, μ-law

compression, and discard mode compression (the image processor 24 performs color

signal processing, A/D conversion, γ correction, image compression and the like,

column 7 lines 14-17)."

### Double Patenting

5.      The nonstatutory double patenting rejection is based on a judicially created
doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the
unjustified or improper timewise extension of the "right to exclude" granted by a patent
and to prevent possible harassment by multiple assignees.   A nonstatutory

obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

6.      **Claims1 –20** are provisionally rejected on the ground of nonstatutory

obviousness-type double patenting as being unpatentable over claims 1, 2, 8-12, 18

and 19 of copending Application No. 10/681,816. Although the conflicting claims are

not identical, they are not patentably distinct from each other because:

| Present Application | Published Co-Pending Application |
|---|---|
| 1. A digital camera for capturing an image comprising: <br> an image sensor; <br> a capture trigger; <br> a capture buffer comprising a plurality of buffer locations, each of which is available for storing image data; and <br> a processing system configured to detect activation of the capture trigger and receive a corresponding image frame from the image sensor, to store the corresponding image frame in an available buffer location, **to perform image processing on the corresponding image frame**, and to designate the available buffer location in which the corresponding image | 1 A digital camera for capturing an image comprising: <br> an image sensor; <br> a capture trigger; <br> a capture buffer comprising a plurality of buffer locations, each of which is available for storing image data; and <br> a processing system configured to receive a plurality of auxiliary image frames from the image sensor and to store each auxiliary image frame in an available buffer location, to detect activation of the capture trigger and receive a corresponding image frame from the image sensor, to store the corresponding image frame in another available buffer location, **to perform** |

| | |
|---|---|
| frame is stored as unavailable for image storage until the image processing is complete.<br><br>3. The digital camera of claim 1 wherein the processing system is configured to receive auxiliary image frames from the image sensor and to store each auxiliary image frame in another available buffer location. | **blur correction on the corresponding image frame using at least one auxiliary image frame**, and to designate the buffer locations in which the corresponding image frame and the at least one auxiliary image frame are stored as unavailable for image storage until the blur correction is complete. |
| 2. The digital camera of claim 1 wherein the processing system further is configured to detect a second activation of the capture trigger and receive a second corresponding image frame from the image sensor, to store the second corresponding image frame in a second available buffer location, **to perform image processing** on the second corresponding image frame, and to designate the second available buffer location as unavailable for image storage until the image processing is complete. | 8. The digital camera of claim 1 wherein the processing system further is configured to detect a second activation of the capture trigger and to receive a second corresponding image frame from the image sensor, to store the second corresponding image frame in a second available buffer location, **to perform second blur correction** on the second corresponding image frame **using at least one second auxiliary image frame**, and to designate the buffer locations in which the second corresponding image frame **and the at least one second auxiliary image frame are stored** as unavailable for image storage until the second blur correction is complete |
| 4. The digital camera of claim 3 wherein the processing system further is configured to use at least one auxiliary image frame **to perform the image processing on the corresponding image frame** and to designate at least one another available buffer location in which the at least one auxiliary image frame is stored as unavailable for image storage until the image processing is complete. | 2. The digital camera of claim 1 wherein the processing system further is configured **to perform blur correction on the corresponding image frame** using a plurality of auxiliary image frames and to designate the buffer locations in which the plurality of auxiliary image frames are stored as unavailable for image storage until the blur correction is complete. |
| 5. The digital camera of claim 1 wherein the processing system further is configured to compress the corresponding image frame prior to storing the corresponding image frame | 9. The digital camera of claim 1 wherein the processing system further is configured to compress the corresponding image frame prior to storing the corresponding image frame |

| | |
|---|---|
| in the available buffer location with at least one compression method selected from a group consisting of A-law compression, μ-law compression, and discard mode compression. | in the another available buffer location with at least one compression algorithm selected from a group consisting of A-law compression, μ-law compression, and discard mode compression. |
| 7. A method for capturing an image in a digital camera, the digital camera comprising an image sensor, a capture trigger, a capture buffer comprising a plurality of buffer locations each of which is available for storing image data, and a processing system, the method comprising:<br>  detecting activation of the capture trigger and receiving a corresponding image frame at the processing system from the image sensor;<br>  storing the corresponding image frame in an available buffer location;<br>  performing image processing on the corresponding image frame; and<br>  designating the available buffer location in which the corresponding image frame is stored as unavailable for image storage until the image processing is complete.<br><br>9. The method of claim 7 further comprising receiving a plurality of auxiliary image frames from the image sensor and storing each auxiliary image frame in another available buffer location. | 10. A method for capturing an image in a digital camera, the digital camera comprising an image sensor, a capture trigger, a capture buffer comprising a plurality of buffer locations each of which is available for storing image data, and a processing system, the method comprising:<br>  storing **each of a plurality of auxiliary image frames** from the image sensor in an available buffer location;<br>  detecting activation of the capture trigger at the processing system and storing a corresponding image frame from the image sensor in another available buffer location; and<br>  performing **blur correction** with the processing system on the corresponding image frame using at least one auxiliary image frame.<br><br>11. The method of claim 10 further comprising designating the buffer locations in which the corresponding image frame and the at least one auxiliary image frame are stored as unavailable for image storage until the **blur correction** is complete. |
| 8. The method of claim 7 further comprising:<br>  detecting a second activation of the capture trigger and receiving a second corresponding image frame at the processing system from the image sensor;<br>  storing the second corresponding | 18. The method of claim 11 further comprising:<br>  detecting a second activation of the capture trigger at the processing system and storing a second corresponding image frame from the image sensor in a second another available buffer location; and |

| image frame in a second available buffer location;<br><br>  performing image processing on the second corresponding image frame; and<br><br>  designating the second available buffer location in which the second corresponding image frame is stored as unavailable for image storage until the second image processing is complete. | performing **blur correction** with the processing system on the second corresponding image frame **using at least one second auxiliary image frame**. |
|---|---|
| 10. The method of claim 9 further comprising:<br><br>  detecting a plurality of second activations of the capture trigger and receiving a plurality of second corresponding image frames at the processing system from the image sensor;<br><br>  storing each of the plurality of second corresponding image frames in second available buffer locations;<br><br>  performing image processing on the second plurality of corresponding image frames; and<br><br>  designating each of the second available buffer locations in which the second plurality of corresponding image frames are stored as unavailable for image storage until the image processing is complete for that second corresponding image frame. | 18. The method of claim 11 further comprising:<br><br>  detecting a second activation of the capture trigger at the processing system and storing a second corresponding image frame from the image sensor in a second another available buffer location; and<br><br>  performing **blur correction** with the processing system on the second corresponding image frame **using at least one second auxiliary image frame**. |
| 12. The method of claim 9 further comprising using at least one auxiliary image frame to perform the **image processing** on the corresponding image frame and designating the at least another available buffer location in which the at least one auxiliary image frame is stored as unavailable for image storage until image processing is complete. | 12. The method of claim 10 further comprising performing **blur correction** on the corresponding image frame using a plurality of auxiliary image frames and designating the buffer locations in which the corresponding image frame and the plurality of auxiliary image frames are stored as unavailable for image storage until the blur correction is complete. |
| 13. The method of claim 9 further comprising compressing the plurality of | 19. The method of claim 10 further comprising compressing the |

| | |
|---|---|
| auxiliary image frames prior to storing the plurality of auxiliary image frames in the another available buffer locations with at least one compression method selected from a group consisting of A-law compression, μ-law compression, and discard mode compression. | corresponding image frame prior to storing the corresponding image frame in the another available buffer location with at least one compression algorithm selected from a group consisting of A-law compression, μ-law compression, and discard mode compression. |
| 14. The method of claim 7 further comprising compressing the corresponding image frame prior to storing the corresponding image frame in the available buffer location with at least one compression method selected from a group consisting of A-law compression, μ-law compression, and discard mode compression. | 19. The method of claim 10 further comprising compressing the corresponding image frame prior to storing the corresponding image frame in the another available buffer location with at least one compression algorithm selected from a group consisting of A-law compression, μ-law compression, and discard mode compression. |
| 16. A method for capturing an image in a digital camera, the digital camera comprising an image sensor, a capture trigger, a capture buffer comprising a plurality of buffer locations each of which is available for storing image data, and a processing system, the method comprising:<br>  detecting a plurality of activations of the capture trigger and receiving a plurality of corresponding image frames at the processing system from the image sensor;<br>  storing each corresponding image frame in a corresponding available buffer location;<br>  performing image processing on each corresponding image frame; and<br>  designating each corresponding available buffer location in which each corresponding image frame is stored as unavailable for image storage until the image processing is complete for that corresponding image frame.<br><br>17. The method of claim 16 further | 10. A method for capturing an image in a digital camera, the digital camera comprising an image sensor, a capture trigger, a capture buffer comprising a plurality of buffer locations each of which is available for storing image data, and a processing system, the method comprising:<br>  storing **each of a plurality of auxiliary image frames** from the image sensor in an available buffer location;<br>  detecting activation of the capture trigger at the processing system and storing a corresponding image frame from the image sensor in another available buffer location; and<br>  performing **blur correction** with the processing system on the corresponding image frame using at least one auxiliary image frame.<br><br>11. The method of claim 10 further comprising designating the buffer locations in which the corresponding image frame and the at least one |

| | |
|---|---|
| comprising receiving auxiliary image frames from the image sensor and storing each auxiliary image frame in another available buffer location.<br><br>18. The method of claim 17 further comprising receiving at least one of the auxiliary image frames before receiving at least one of the plurality of corresponding image frames.<br><br>19. The method of claim 17 further comprising using at least one auxiliary image frame to perform the image processing on at least one of the plurality of corresponding image frames and designating at least one another buffer location in which the at least one auxiliary image frame is stored as unavailable until the image processing is complete on the at least one corresponding image. | auxiliary image frame are stored as unavailable for image storage until the **blur correction** is complete.<br><br>18. The method of claim 11 further comprising:<br>  detecting a second activation of the capture trigger at the processing system and storing a second corresponding image frame from the image sensor in a second another available buffer location; and<br>  performing **blur correction** with the processing system on the second corresponding image frame **using at least one second auxiliary image frame**. |
| 20. The method of claim 16 further comprising compressing the corresponding image frames prior to storing the corresponding image frames in the corresponding available buffer locations with at least one compression method selected from a group consisting of A-law compression, µ-law compression, and discard mode compression. | 19. The method of claim 10 further comprising compressing the corresponding image frame prior to storing the corresponding image frame in the another available buffer location with at least one compression algorithm selected from a group consisting of A-law compression, µ-law compression, and discard mode compression. |

**Claim 1** of the present application is broader and fully encompassed by **Claim 1** of the referenced co-pending application. In view of the broadly recited "image processing" of Claim 1, Claim 1 of the referenced co-pending application specifically requires "blur correction" – the remaining limitations are the same. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have included the narrower "blur correction".

  **Claim 2** of the present application is broader and fully encompassed by **Claim 8** of the referenced co-pending application. In view of the broadly recited "image processing" of Claim 2, Claim 8 of the referenced co-pending application specifically requires "blur correction" – the remaining limitations are the same. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have included the narrower "blur correction".

  **Claim 3** of the present application is broader and fully encompassed by **Claim 1** of the referenced co-pending application. In view of the broadly recited "image processing" of Claim 3, Claim 1 of the referenced co-pending application specifically requires "blur correction" – the remaining limitations are the same. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have included the narrower "blur correction".

  **Claim 4** of the present application is broader and fully encompassed by **Claim 2** of the referenced co-pending application. In view of the broadly recited "image processing" of Claim 4, Claim 2 of the referenced co-pending application specifically requires "blur correction" – the remaining limitations are the same. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have included the narrower "blur correction".

  **Claim 5** of the present application is the same as **Claim 9** of the referenced copending application.

  **Claim 7** of the present application is broader and fully encompassed by **Claim 10** and Claim 11 of the referenced co-pending application. In view of the broadly recited

"image processing" of Claim 7, Claim 10 and Claim 11 of the referenced co-pending application specifically requires "blur correction" – the remaining limitations are the same. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have included the narrower "blur correction".

**Claim 8** of the present application is broader and fully encompassed by **Claim 18** of the referenced co-pending application. In view of the broadly recited "image processing" of Claim 8, Claim 18 of the referenced co-pending application specifically requires "blur correction" – the remaining limitations are the same. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have included the narrower "blur correction".

**Claim 9** of the present application is broader and fully encompassed by **Claim 10** and Claim 11 of the referenced co-pending application. In view of the broadly recited "image processing" of Claim 9, Claim 10 and Claim 11 of the referenced co-pending application specifically requires "blur correction" – the remaining limitations are the same. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have included the narrower "blur correction".

**Claim 10** of the present application is broader and fully encompassed by **Claim 18** of the referenced co-pending application. In view of the broadly recited "image processing" of Claim 10, Claim 18 of the referenced co-pending application specifically requires "blur correction" – the remaining limitations are the same. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have included the narrower "blur correction".

Claim 12 of the present application is broader and fully encompassed by Claim 12 of the referenced co-pending application. In view of the broadly recited "image processing" of Claim 12, Claim 12 of the referenced co-pending application specifically requires "blur correction" – the remaining limitations are the same. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have included the narrower "blur correction".

Claim 13 of the present application is the same as Claim 19 of the referenced copending application.

Claim 14 of the present application is the same as Claim 19 of the referenced copending application.

Claim 16 of the present application is broader and fully encompassed by Claim 18 of the referenced co-pending application. In view of the broadly recited "image processing" of Claim 16, Claim 18 of the referenced co-pending application specifically requires "blur correction" – the remaining limitations are the same. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have included the narrower "blur correction".

Claim 17 of the present application is broader and fully encompassed by Claim 18 of the referenced co-pending application. In view of the broadly recited "image processing" of Claim 17, Claim 18 of the referenced co-pending application specifically requires "blur correction" – the remaining limitations are the same. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have included the narrower "blur correction".

**Claim 18** of the present application is broader and fully encompassed by **Claim 18** of the referenced co-pending application. In view of the broadly recited "image processing" of Claim 18, Claim 18 of the referenced co-pending application specifically requires "blur correction" – the remaining limitations are the same. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have included the narrower "blur correction".

**Claim 19** of the present application is broader and fully encompassed by **Claim 18** of the referenced co-pending application. In view of the broadly recited "image processing" of Claim 19, Claim 18 of the referenced co-pending application specifically requires "blur correction" – the remaining limitations are the same. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have included the narrower "blur correction".

**Claim 20** of the present application is the same as **Claim 19** of the referenced copending application.

**Claims 6, 11, and 15** are not patentably distinct by virtue of their dependency upon rejected base claims (Claims 1, 7, and 7 respectively).

This is a <u>provisional</u> obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

## *Conclusion*

7.     The prior art made of record and not relied upon is considered pertinent to

applicant's disclosure.  Pope (US 2004/0070679) discloses a system for compensating

for delays in a digital still imaging system and the use image buffer for continuously

capturing images of a scene and them selected a particular image to save based on a

shutter release button being depressed.  Lee (US 2005/0001908) discloses a digital

camera with continuous image acquisition and the use of a buffer memory to store the

images until a button is depressed.


     Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Scott Egan whose telephone number is (571) 270-1452.

The examiner can normally be reached on Monday-Friday 8:00 a.m. - 5:00 p.m., EST.

     If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Ngoc-Yen Vu can be reached on (571) 272-7320.  The fax phone number

for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the

Patent Application Information Retrieval (PAIR) system. Status information for

published applications may be obtained from either Private PAIR or Public PAIR.

Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see http://pair-direct.uspto.gov. Should

you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a

USPTO Customer Service Representative or access to the automated information

system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

SE
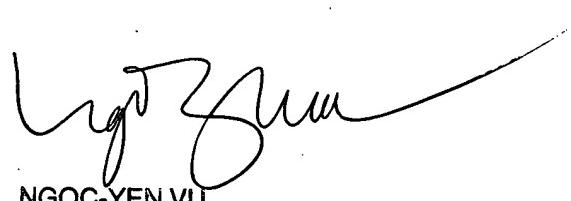
NGOC-YEN VU
SUPERVISORY PATENT EXAMINER